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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,826	11/29/2001	Norimichi Chiba	216638US2S	9742
22850	7590	03/08/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			TRAN, THUY V	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/995,826	Applicant(s) CHIBA ET AL.	
	Examiner Thuy V. Tran	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>received 1/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to the Applicants' filing on 11/29/2001. In virtue of this filing, claims 1-8 are currently presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Inventorship

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Information Disclosure Statement

3. The information disclosure statement (IDS) received on January 30th, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings Objections

4. The drawings are objected to because of the following informalities:

- Missing reference numerals/characters in Figs. 4-5 and 7-8; and
- Figs. 9 and 10 are not labeled correctly.

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5. Figures 9 and 10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Title Objection

6. The title of the invention is objected to since it is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

--RADIO SETS FOR VARIOUS MOBILE COMMUNICATION SYSTEMS--.

Claim Objections/ Minor Informalities

7. Claims 1 and 6 are objected to because of the following informalities:

Claim 1, line 8, --to each other-- should be added after "connected"; and

Claim 6, line 11, "that" should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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9: Claims 1-2 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekine et al. (U.S. Patent No. 5,903,822).

With respect to claim 1, Sekine et al. discloses, in Embodiment 3 including Figs. 32-34 and 38-41, a radio set comprising (1) an antenna [103] for transmitting radio signals and receiving radio signals, (2) a circuit substrate [102] comprising a radio circuit [202, 201] (which are transmitting and receiving circuits; see Fig. 38) for transmitting and receiving radio signals, and (3) a plurality of ground patterns [102-a', 102-b] provided on said circuit substrate; said ground patterns [102-a', 102-b] are electrically connected to each other by connection means [104] (see Fig. 33) so as to generate electric currents which have the same phase as an electric current generated in said antenna; said connection means [104] is arranged to cause an electric current flow, which has a phase opposite to the phase of the electric current generated in said antenna.

With respect to claim 2, Fig. 33 of Sekine et al. shows that the connection means is an inductor.

With respect to claim 4, Sekine et al. discloses, in Fig. 38, a radio set comprising (1) an antenna [103] for transmitting radio signals and receiving radio signals, and (2) a circuit substrate [102] comprising a ground pattern and a radio circuit [201, 202] (which are transmitting and receiving circuits, respectively; see Fig. 38) for transmitting and receiving radio signals; said ground pattern [102] has a notch [101] (see col. 11, line 15) at a position where an electric current having a phase opposite to the phase of the electric current generated in said antenna is likely to be generated; said notch [101] extends perpendicularly to the direction in

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which the electric current generated in said antenna flows, so as not to generate an electric current having a phase opposite to the phase of the electric current generated in said antenna.

With respect to claim 5, Sekine et al. discloses, in Figs. 38 and 42, a radio set comprising (1) an antenna [103] for transmitting radio signals and receiving radio signals, and (2) a circuit substrate [102] comprising a ground pattern and a radio circuit [201, 202] (which are transmitting and receiving circuits, respectively; see Fig. 38) for transmitting and receiving radio signals; said ground pattern has a projection [111] (see Fig. 42) at a position where an electric current having a phase opposite to the phase of the electric current generated in said antenna is likely to be generated; said projection [111] extends perpendicularly to the direction in which the electric current generated in said antenna flows, so as not to generate an electric current having a phase opposite to the phase of the electric current generated in said antenna.

With respect to claim 6, Sekine et al. discloses, in Figs. 32-34 and 38-41, a radio set comprising (1) an antenna [103] for transmitting radio signals and receiving radio signals, (2) a circuit substrate [102] comprising a radio circuit [201, 202] (which are transmitting and receiving circuit, respectively; see Fig. 38) for transmitting and receiving radio signals, (3) a first ground pattern [102-a'] provided on said circuit substrate [102], (4) a second ground pattern [102-b] provided on said circuit substrate [102], and (5) connection means [104] (see fig. 33) for electrically connecting the first and second ground patterns, so as to make that electric currents flowing through said first and second ground patterns have the same phase as the electric current generated in said antenna.

With respect to claim 7, Fig. 33 of Sekine et al. shows that the connection means is an inductor.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Embodiment 3 (including Figs. 32-34, 38-41) of Sekine et al. (U.S. Patent No. 5,903,822) in view of Embodiment 6 (including Figs. 44-48) of Sekine et al. (U.S. Patent No. 5,903,822).

With respect to claims 3 and 8, Embodiment 3 of Sekine et al. discloses all of the claimed limitations, as expressly recited in claims 1 and 6, except for the connection means being a capacitor.

Embodiment 6 of Sekine et al., however, discloses the use of a capacitor [124] (which is included in device [122]; see Fig. 45) to connect ground patterns [102-a, 102-b] together to prevent the direct current from flowing to the substrate (or housing) and to be against the radio frequency current (see col. 14, lines 61-63).

For such an advantage taught in Embodiment 6 of Sekine et al., to implement the Embodiment 3 of Sekine et al. with the use of a capacitor, instead of a coil or inductor, to connect the ground patterns together would have been deemed obvious to a person skilled in the art.

Citation of relevant prior art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Prior art Koyanagi et al. (U.S. Patent No. 6,459,412) discloses an antenna unit.

Prior art Sawamura et al. (U.S. Patent No. 6,362,793) discloses a portable radio set.

Prior art Sawamura et al. (U.S. Patent No. 6,362,792) discloses a portable radio set.

Prior art Jang (U.S. Patent No. 5,731,791) discloses an antenna connecting device for portable radio sets.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

03/06/2005



**THUY V. TRAN
PRIMARY EXAMINER**